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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
BLACKWELL, GWENDOLYN				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/598,594

Applicant(s)

DEGAND ET AL.

Examiner

GWENDOLYN BLACKWELL

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date 9/5/06

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed September 5, 2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 with regards to the foreign patent document DE 2542441 because there is no English translation or abstract submitted with the citation. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

2. The drawings are objected to because the background of the drawings is too dark. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
in the specification the use of claim numbers is objected to as the numbering could change during the prosecution of the present application. It is suggested to remove the claim numbers from the specification.

Appropriate correction is required.

Claim Objections

4. Claims 1, 4-6, and 9-10 are objected to because of the following informalities:
Claim 1 is objected to for having an improper alternative claim language. Either proper Markush groups should be used or an alternative expression "or" should be used. See *MPEP* 2173.05(h).

Claim 4 is objected to for not using proper punctuation in separating the elements of the claim. For example, in line 7, a comma should be present after "material".

Claim 5, line 1 includes the term "of" which seems to be an extraneous word. Additionally semi-colons are missing at the end of items d), e), f) and g); there is an "or" missing at the end of item g); and a period is missing at the end of item h).

Claim 6, line 5 is missing a comma after sheet as well as line 7 is missing a comma and the term "and".

Claim 9, line 4 is missing a colon after "characteristics" and an "or" at the end of item a). A comma is also missing at the end of line 8.

Claim 10 is missing semi-colons at the end of items a), b), c), d), e), f), and g); an "or" is missing at the end of item g); and a period should be placed at the end of item h).

As there are several punctuations and alternative language issues noted, it is suggested that all the claims are looked at to ensure that all punctuation and alternative language issues are resolved. Appropriate correction is required.

Claim Rejections - 35 USC §§ 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

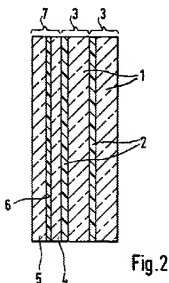
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(c), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-5, 9-11, 13-19, and 21-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Application Publication no. 1 044 801 A2, EP '801.

Regarding Claims 1-3, 11, 13-16, 18, 21, and 23

EP '801 disclose a fire protection glass as seen in Figure 2 below:



wherein layer 6 is a foil of ethylene-vinyl acetate (EVA) laminated between two glass panes. Each of the glass sheets 4 and 5 have a thickness in the range of 1-2.0 mm. Example 1 utilized glass sheets having a size of about $2 \times 3 \text{ m}^2$ ($200 \times 300 \text{ cm}^2$), (page 4, section 0028). Although not specifically disclosed that the interlayer has the specifically claimed maximum heat release or mechanical resistance, the properties would be considered inherent as the structural composition of the glazing panel has been met absent an objective evidentiary showing to the contrary, meeting the limitations of claim 1. See *MPEP 2112*.

In Figure 2 (as seen above) the glass sheet 1 is separated from glass sheets 4 and 5 by an intermediate fire-retardant layer 2, (page 4, section 0020), wherein the glass sheet 1 has a thickness of 1.5 mm, (page 5, section 0028), meeting the limitations of claim 2.

The glass of Figure 2 (as seen above) is comprised of at least three substrates (1, 4, and 5) adhered to each other through the means of interlayers (2 and 6) to form a laminated assembly. As the structure of the laminated assembly is present along with the claimed materials to be used for each layer, it would be expected that the claimed fire rating and bullet resistance would be present absent an objective evidentiary showing to the contrary, meeting the limitations of claim 3.

The intumescent layer is comprised of an alkali silicate with a SiO_2 to Na_2O weight ratio in the range of 2.7 to 3.5, most preferably about 3.3, (page 3, section 0013), meeting the limitations of claim 11.

Soda lime glass can be used for the glass sheets, (page 4, section 0020), meeting the limitations of claim 14.

Claims 13, 15-16, 18, 21, and 23 claim physical properties based upon the claimed structure. As the structural and compositional components of the glazing panel are disclosed in EP '801, it would be expected that the claimed physical properties would be present absent an objective evidentiary showing to the contrary, meeting the requirements of claims 13, 15-16, 18, and 23.

Regarding claims 4-5, 9-10, 17, 19, 22, 24, and 25

For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase 'consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See *MPEP 2111.03*.

Example 1 utilized glass sheets having a size of about $2 \times 3 \text{ m}^2$ ($200 \times 300 \text{ cm}^2$), (column 6, section 0028). Figure 2, as shown and described above, meets the structural and compositional limitations of claims 4 and 9-10. As the structural and compositional limitations are met, the claimed physical properties are considered inherent absent an objective showing to the contrary, meeting the limitations of claims 4-5, 9-10, 17, 19, and 22.

According to Example 1, the intumescent layer has a thickness of 0.7 mm, (page 4, section 0027), meeting the limitations of claim 24.

The intumescent layer is comprised of an alkali silicate with a SiO_2 to Na_2O weight ratio in the range of 2.7 to 3.5, most preferably about 3.3, (page 3, section 0013), meeting the limitations of claim 25.

Claim Rejections - 35 USC § 103

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application Publication no. 1 044 801 A2, EP '801 in view of United States Patent no. 4,173,668, Hentzelt et al.

Regarding claim 6

For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase 'consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See *MPEP 2111.03*.

EP '801 disclose a fire protection large area glazing in excess of $1 \times 2 \text{ m}^2$ wherein the thickness of the individual glass sheets is in the range of 1 to 2.6 mm, (page 2, section 0008; page 3, section 0010). The glass sheets can be laminated with fire resistant interlayers such as an alkali silicate and/or plastic layer, (page 2, sections 0001-0004). EP '801 does not specifically disclose the use of infrared coatings with the glazing.

Hentzelt et al disclose a fire screening panel comprised of glass sheets laminated with interlayers of intumescent materials (alkali silicates) and plastic membranes, (columns 3-4, lines 48-30). In addition to the intumescent materials and plastic membranes, infrared reflective coatings can be incorporated into the structure of the fire screening panel. As noted in Figures 1-5, the infrared reflecting coating can be placed on different surfaces of the panel depending on the orientation of the panel, (column 8, lines 51-55).

EP '801 and Hentzelt et al disclose analogous inventions related to fire resistant glazings. It would have been within the skill of one in the art at the time of invention to modify the glazing of EP '801 with the infrared coating of Hentzelt et al in order to not only provide the intumescent layers of the panel from solar degradation but to also delay the heating of the other layers of the panel thereby increasing the time during which that panel can be touched without risk of being seriously burnt, (Hentzelt, columns 6-7, lines 29-16), meeting the requirements of claims 6-8.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application Publication no. 1 044 801 A2, EP '801 as applied to claim 1, above in view of United States Patent no. 4,173,668, Hentzelt et al.

The limitations of claim 1 has been set forth above. EP '801 does not specifically disclose a solar control or heat reflective coating as claimed.

Hentzelt et al disclose a fire screening panel comprised of glass sheets laminated with interlayers of intumescent materials (alkali silicates) and plastic membranes, (columns 3-4, lines 48-30). In addition to the intumescent materials and plastic membranes, infrared reflective coatings can be incorporated into the structure of the fire screening panel. As noted in Figures 1-

5, the infrared reflecting coating can be placed on different surfaces of the panel depending on the orientation of the panel, (column 8, lines 51-55).

EP '801 and Hentzelt et al disclose analogous inventions related to fire resistant glazings. It would have been within the skill of one in the art at the time of invention to modify the glazing of EP '801 with the infrared coating of Hentzelt et al in order to not only provide the intumescent layers of the panel from solar degradation but to also delay the heating of the other layers of the panel thereby increasing the time during which that panel can be touched without risk of being seriously burnt, (Hentzelt, columns 6-7, lines 29-16), meeting the requirements of claim 20.

11. Claims 12 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application Publication no. 1 044 801 A2, EP '801 as applied to claims 3 and 10-11 above, in view of United Kingdom Patent Application Publication no. 2 258 422 A, GB '422.

The limitations of claims 3 and 10-11 have been set forth above. EP '801 disclose that the tumescent material is an alkali silicate and that the water content should be less than 28 wt%, (page 3, section 0013). EP '801 does not specifically disclose that the water content of the intumescent layer should be less than or equal to 22 wt%.

GB '422 disclose a transparent fire-resistant panel comprised of at least one layer of intumescent material. The intumescent material is comprised of metal silicates having a total water content in the range of 20-26 wt%.

EP '801 and GB '422 are analogous inventions related to fire resistant glazings. It would have been obvious to one skilled in the art at the time of invention to modify the alkali silicate of

EP '801 to have a water content of less than 22 wt% as a lower water content is "less susceptible to deterioration of the optical properties over the course of time than is a known panel in which the water content is somewhat higher", (GB '422, page 4, lines 6-14), meeting the requirements of claims 12 and 26-27. In addition, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWENDOLYN BLACKWELL whose telephone number is 571-272-5772. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GWENDOLYN BLACKWELL/
Primary Examiner, Art Unit 1794

gab